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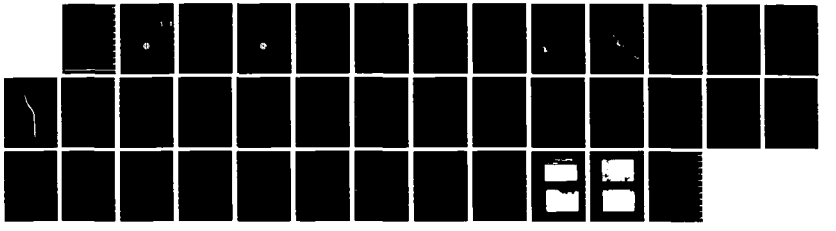

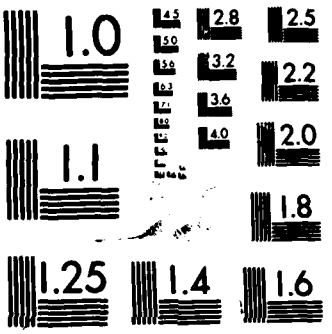

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AN ARCHAEOLOGICAL RECONNAISSANCE SURVEY OF THE PROPOSED CHANNEL REALIGNMENT AREA AT BIG STONE-WHETSTONE FLOOD CONTROL PROJECT, BIG STONE AND LAC QUI PARLE COUNTIES, MINNESOTA

Contract Number DACW37-80-M-1545

by

Kathleen A. Roetzel, Principal Investigator
Impact Services Incorporated
P. O. Box 3224
Mankato, Minnesota 56001

August 1980

Kathleen A. Roetzel
Principal Investigator

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The purpose of this report is to present the results and recommendations of the archaeological reconnaissance survey of the channel realignment at the Big Stone-Whetstone flood control project area, Big Stone and Lac Qui Parle counties, Minnesota. The project area is located along the upper Minnesota River. The proposed channel realignment and associated spoilbanks are approximately 2 miles with a right-of-way corridor of 500 feet.

No artifactual material or cultural features were located within the project area as a result of the field investigation. Based upon the results of this survey, it appears that no archaeological sites will be altered, damaged or destroyed as a result of construction activities.

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ABSTRACT

The purpose of this report is to present the results and recommendations of the archaeological reconnaissance survey of the channel realignment area at the Big Stone-Whetstone flood control project area, Big Stone and Lac Qui Parle Counties, Minnesota. The project was done under contract with the United States Army Corps of Engineers, St. Paul District (Contract Number DACW37-M-80-1545).

The project area is located along the upper Minnesota River. It is located southeast of Big Stone Lake and Ortonville, Minnesota in sections 16, 21, 22, and 27; Township 121N, Range 46W. The proposed channel realignment and associated spoilbanks are approximately 2 miles long with a right-of-way corridor of 500 feet.

Survey methodologies included surface reconnaissance, shovel testing, rake testing, and cut bank planing. The combination of field methods utilized in various areas of the project were dependent upon varying field conditions. Surface reconnaissance was done at a 10 meter interval and shovel testing was done at a 15 meter interval.

No artifactual material or cultural features were located within the project area as a result of the field investigation. Based upon the results of this survey, it appears that no archaeological sites will be altered, damaged, or destroyed as a result of construction activities.

TABLE OF CONTENTS

INTRODUCTION

The purpose of this report is to present the results and recommendations of the archaeological reconnaissance survey of the channel realignment area at the Big Stone-Whetstone flood control project area, Big Stone and Lac Qui Parle Counties, Minnesota. The project was done under contract with the St. Paul District Corps of Engineers, St. Paul, Minnesota (Contract Number DACW37-80-M-1545). The survey and report was done in compliance with the National Environmental Act of 1966 (P. L. 89-665); Protection and Enhancement of the Cultural Environment (EO11593); Advisory Council's Procedures for the Protection of Historic and Cultural Properties (36 CFR 800); Preservation of Historic and Archaeological Data 1974 (P. L. 93-291); and Identification and Administration of Cultural Resources (33 CFR 305).

The field reconnaissance was conducted during the week of May 5, 1980. It was carried out under the direct supervision of Kathleen A. Roetzel, Principal Investigator. Also participating in the project were Michael A. Eigen, Historical Archaeologist, Patricia Emerson, graduate student at Mankato State University, and Bruce Terry, undergraduate student at Mankato State University.

Project Description

The Big Stone Lake-Whetstone River Flood Control Project consists of a dam, reservoir, channel improvements, and water control structures. The area included in this survey is a

proposed channel realignment along the Minnesota River. The proposed channel and associated spoilbanks are approximately 2 miles long with a right-of-way corridor of 500 feet.

Project Location

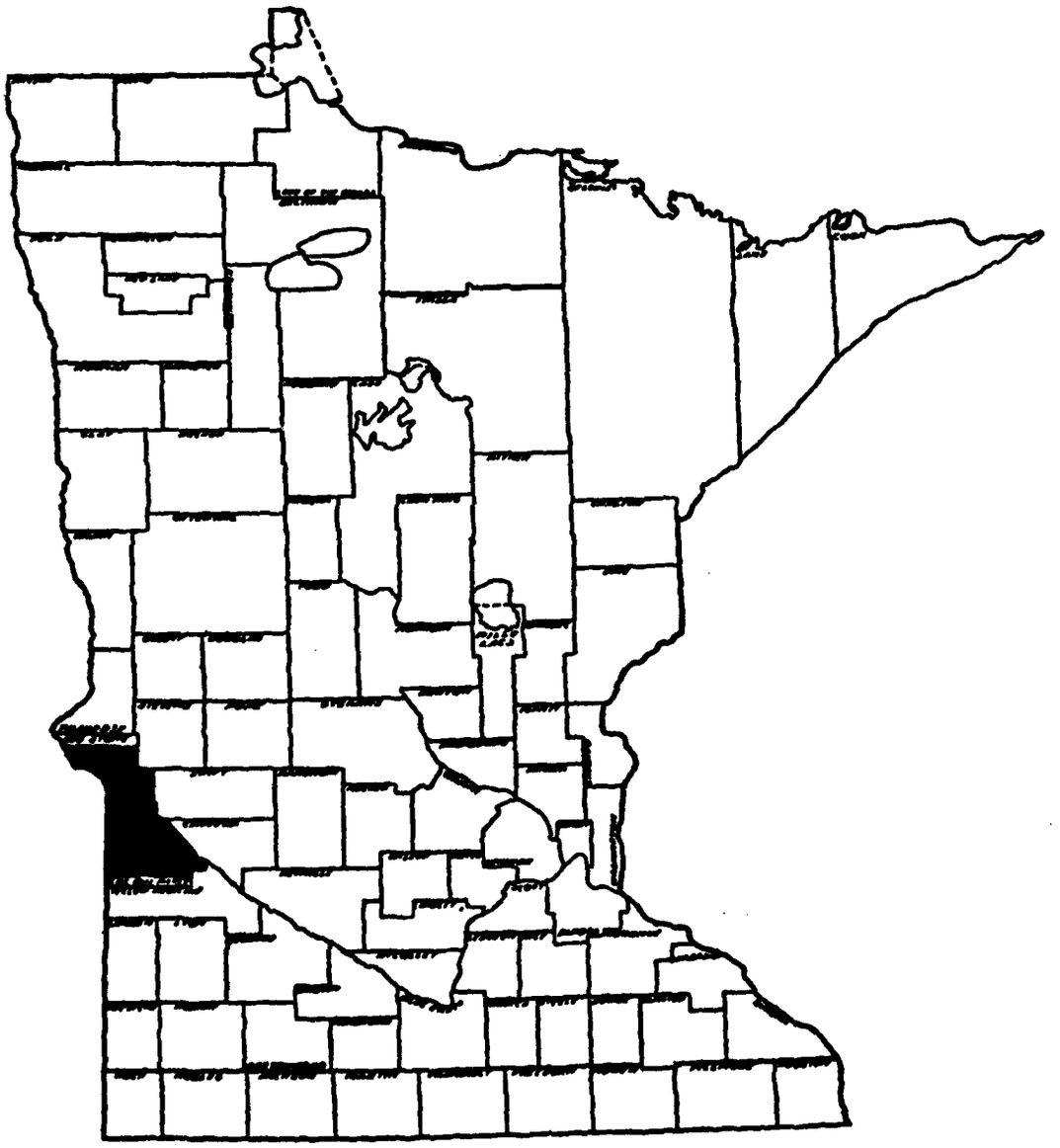
The project area is located along the upper Minnesota River in Big Stone and Lac Qui Parle Counties which border South Dakota. It is located southeast of Big Stone Lake and Ortonville, Minnesota in sections 16, 21, 22 and 27; Township 121N; Range 46W (See Figure 1 and 2).

ENVIRONMENTAL SETTING

The most outstanding characteristic of the project area is the Minnesota River. The overflow from glacial Lake Agassiz in northwestern Minnesota formed glacial River Warren. Today, the Minnesota River occupies the river bed of glacial River Warren. Its expansive alluvial floodplain and low terraces are bordered by high ridges forming the surrounding uplands. Because the channel realignment is bisected by the Minnesota River, the entire project area is located on the floodplain.

Except for the scattered wooded areas, the major ground cover within the survey area is prairie grasses. South of the Minnesota River, the proposed channel is almost entirely tall grasses. It lies within the Big Stone National Wildlife Refuge. North of the Minnesota River, the proposed channel was characterized by scattered stands of trees mixed with pasture grasses. The only cultivated area on the entire two mile channel was at the extreme north end.

Figure 1: Location of Big Stone and Lac Qui Parle Counties



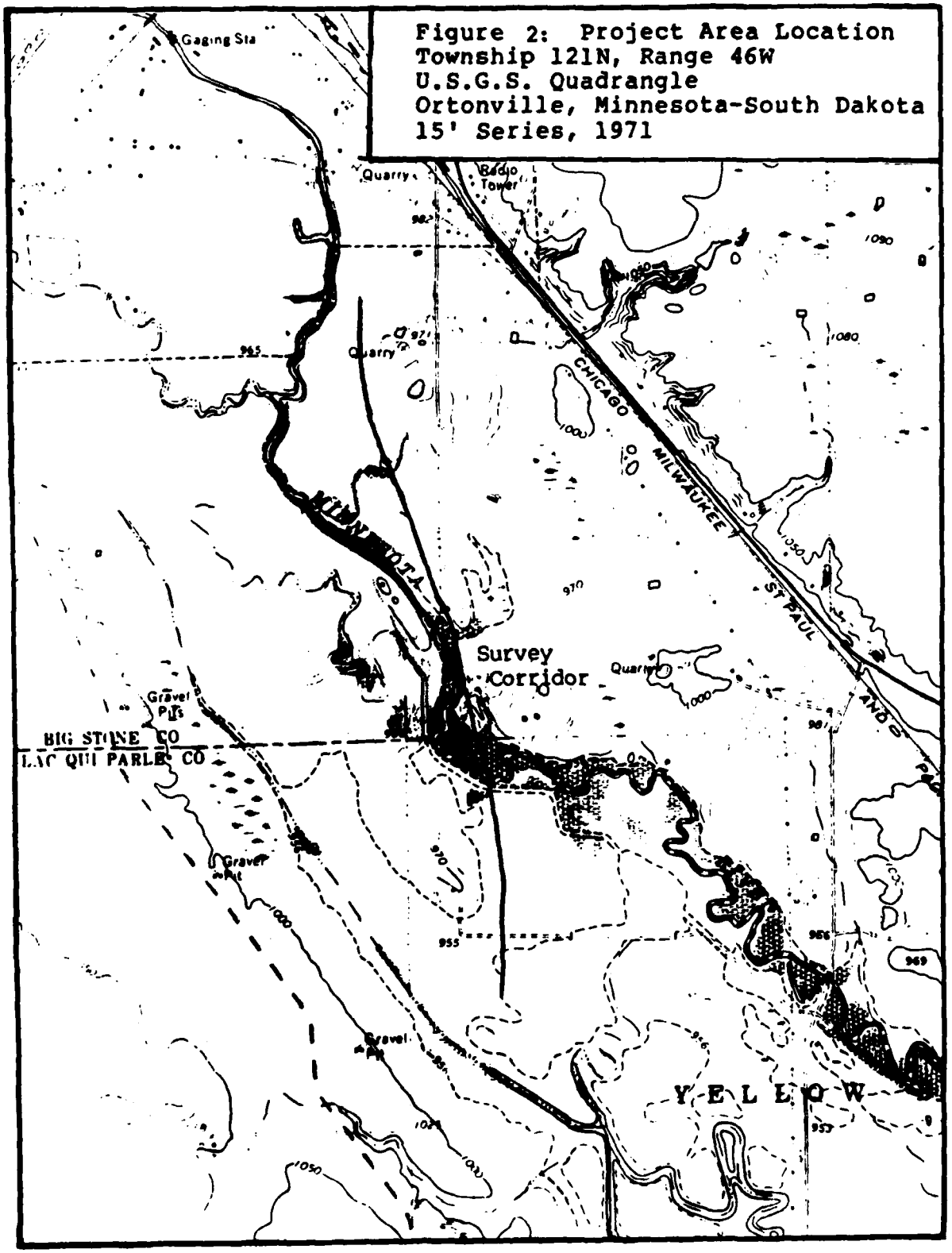


Figure 2: Project Area Location
Township 121N, Range 46W
U.S.G.S. Quadrangle
Ortonville, Minnesota-South Dakota
15' Series, 1971

SURVEY METHODOLOGY

Literature Search

The files at the Office of the State Archaeologist and the State Historic Preservation Officer were checked for the location of known historic or prehistoric cultural resources in or near the project area.

Any pertinent published information was gathered including the reports of previous surveys done in the vicinity. Additionally, the Big Stone and Lac Qui Parle County Historical Societies were contacted for information relevant to the survey area. Local amateur collectors who are knowledgeable of the project area were contacted as well as personnel from the Big Stone National Wildlife Refuge. The results of the literature search is outlined below.

Field Methodology

Based upon the varying ground surface visibility, four types of field methodologies were employed in an attempt to maximize the recovery of cultural material within the project area.

The first was visual examination of the surface where the percentage of ground cover allowed. In the plowed field on the north end of the proposed channel, ground surface reconnaissance was conducted at a 10 meter interval between transect lines. In the wooded areas north of the Minnesota River, the interval for visual examination was necessarily expanded due to the more "patchy" nature of surface visibility. Within the refuge area south of the river, no visual examination was possible except for scattered rodent burrows and open areas.

The second field methodology employed was shovel testing. These subsurface tests were dug at a 15 meter interval. They were 30 cms. by 30 cms., dug in 10 cm. artificial levels to an average depth of 50 cms. All of the fill from each pit was screened through 1/4" mesh screens except where the soil was too wet to process. In these cases, the soil was put into the screens and examined carefully. Shovel testing was done on the entire channel south of the river and was used to supplement the surface reconnaissance north of the river. In the open field on the north end where surface visibility was 100%, shovel tests were dug as a verification of the surface results.

The third methodology utilized was the raking technique which is a combination of surface examination and subsurface testing. This method is effective only in areas where heavy grass cover does not obstruct the ground surface. It is particularly effective in wooded areas where the ground is covered not with thick grasses but with fallen leaves. A hand rake is used to carefully scrape the leaves from the surface in a one meter square area. The surface is then visually examined for cultural material. A trowel can then be used to dig this square down to 10-15 cms., carefully examining the fill. This type of methodology allows the field investigator to incorporate the horizontal examination of surface reconnaissance with the vertical examination of shovel testing in such a way that is not only effective but time saving. In all of the wooded areas north of the Minnesota River, this raking method was employed.

The fourth methodology was planing the cut bank of the

Minnesota River on both the north and south sides. Vertical cuts were made in the cut bank with a trowel as a check for buried cultural material as well as a check of the stratigraphy of the area.

Application of Survey Methodology by Area

Area I is the northern portion of the proposed channel which is a plowed field. The ground surface visibility here was 100%. This area was visually examined at a 10 meter interval. Additionally, 11 shovel tests were dug as a verification of the lack of cultural material found on the surface (See Figure 3).

Area II is that portion of the proposed channel between the Minnsota River and Area I. This area is characterized by scattered stands of trees, open areas, and pasture. Where possible, ground surface reconnaissance was conducted. The ground surface visibility in Area II ranged from 40% to 85%. Subsurface testing in this area included both shovel testing and rake testing as described above. In all of Area II, 107 shovel tests were dug and 236 rake tests were done. Additionally, 3 planes were done on the north bank of the Minnesota River.

Area III extends from the Minnesota River south to the end of the proposed channel. This area could not be surface examined except for scattered rodent burrows and open areas. As in Area II, this area was shovel tested, rake tested, and the cut bank was planed. In all, 67 shovel tests, 86 rake tests, and 6 cut bank planes were done. The extreme south end of the proposed channel is very low with standing water. This was the only portion of the channel alignment that was not surveyed.

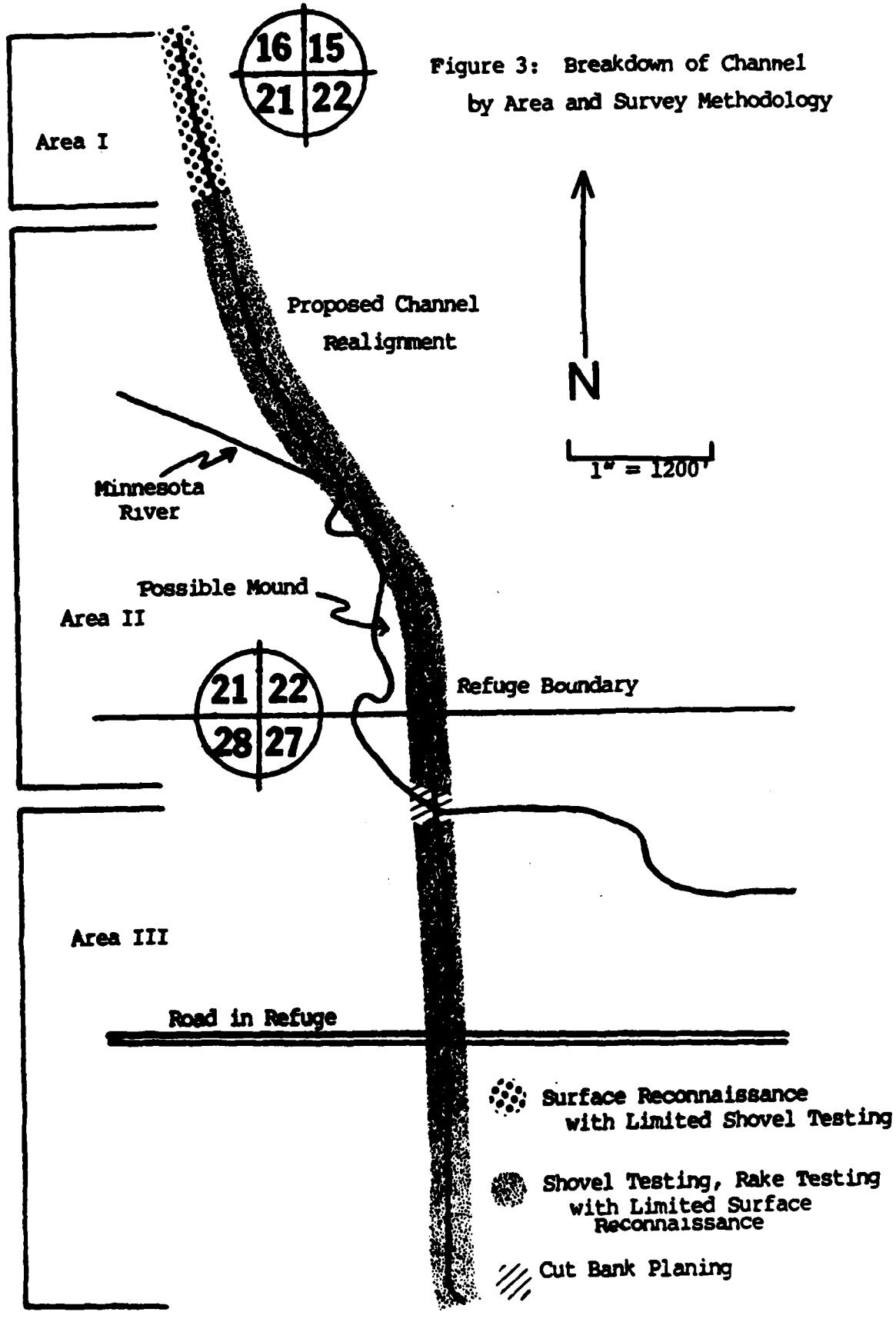


Figure 3: Breakdown of Channel by Area and Survey Methodology

SUMMARY OF AREA PREHISTORY

Several archaeological sites have been excavated in the vicinity of the project area (Streiff 1972:2-3). They include 21BS1, 21BS2, and 21BS20. These sites are described in more detail below. Additionally, three archaeological reconnaissance surveys have been done in the area.

Caine (1974) conducted a survey in the Big Stone-Whetstone Refuge Area in Big Stone and Lac Qui Parle Counties for the National Park Service. Surface reconnaissance as well as subsurface test pitting was done in selected areas of the refuge. One site was located as a result of that survey and was given the site number 21LP11.

Johnson (1975) conducted a survey in the extreme upper Minnesota River and the terminal Whetstone River valleys of Minnesota and South Dakota for the Corps of Engineers. No archaeological sites were located as a result of this survey.

Hudak (1979) conducted an archaeological survey of the proposed wastewater treatment facility at Ortonville, Big Stone County, Minnesota for Ellerbe Associates, Inc., Bloomington, Minnesota. No archaeological materials or features were recovered as a result of this survey.

Johnson (1975:6) concludes that "the area appears to be devoid of sites, and like the valley located immediately downstream, it is a very low area subjected to flooding in the past. Despite the fact that a very large number of prehistoric and historic archaeological sites are recorded for the zones bordering Big Stone and Traverse Lakes, the upper Minnesota Valley lying just below seems to have held little attraction. One can speculate that the lakes themselves with their flat lakeshore beaches, vegetation cover on the steep upland slopes, and the ample water supply and protection offered habitation and burial areas much more attractive than the low flood plain of the Minnesota River bottoms."

SURVEY RESULTS

Literature Search

According to the files at the Office of the State Archaeologist and the State Historic Preservation Office, there are no recorded sites within the immediate project area. However, seven sites are recorded in Ortonville Township (Township 121N, Range 46W). They are 21BS1, 21BS2, 21BS8, 21BS9, 21BS12, 21BS20, and 21BS21.

21BS1: Township 121N, Range 46W, NE 1/4-SW1/4 Section 5. Mound on high bluff in golf course overlooking the lake. Excavated by Jenks in 1959. Cultural affiliation: Oneota. Report by Johnson 1961.

21BS2: Township 121N, Range 46W, NW1/4-NE1/4 Section 5. Mound on high bluff in golf course overlooking the lake. Excavated by Jenks in 1935, and Smith 1941. Cultural affiliation: Unknown. Report by Johnson 1961.

21BS8: Township 121N, Range 46W, NW1/4-SW1/4 Section 15. Mound identified by T. H. Lewis and visited by Wilford in 1943. Cultural affiliation: Unknown.

21BS9: Township 121N, Range 46W, SW1/4-NW1/4 Section 15. Mound identified by T. H. Lewis and visited by Wilford in 1943. Cultural affiliation: Unknown.

21BS12: Township 121N, Range 46W, Section 9. Cultural affiliation: Unknown.

21BS20: Township 121N, Range 46W, SE corner Section 9. Burial in Ortonville at the present location of the Theatre-of-Seasons-Cafe which was excavated by Lloyd Wilford in 1951. Cultural affiliation: Unknown. Report by Wilford 1956.

21BS21: Township 121N, Range 46W, S 1/2 Section 26. Listed as dancerings. The site was visited by Wilford in 1935 and was located in the south half of Section 26. Wilford's last visit to the site was in 1954. According to Caine, (1974:2) the site has been destroyed by the granite quarry's parking lot and storage area. Cultural affiliation: Unknown.

Personal Interviews

Magdalene Sparrow: Ms. Sparrow is the Liason Person for the Big Stone County Historical Society. She helped in locating

information pertaining to the early history of Big Stone County, local collectors in the area, and information pertaining to the prehistory of the area.

Jim Heinecke: Mr. Heinecke is the Manager of the Big Stone National Wildlife Refuge. He was extremely cooperative in helping us determine the exact location of the proposed corridor. He also assisted us in finding the owners and renters of the land and allowed us to use roads within the refuge that are otherwise not used by the public.

Micki Buer: Ms. Buer is the Biological Aide Resource Technician/and Ecological Resource Researcher for the Big Stone National Wildlife Refuge and County Field Historian for the Lac Qui Parle Historical Society. She indicated that the Lac Qui Parle Historical Society had very little information about the prehistory of the area in terms of local collections.

Charles Hanson: Mr. Hanson is a local collector who has a sizeable prehistoric collection from the island in Artichoke Lake. Artichoke Lake is located approximately 17 miles northeast of Ortonville and does not pertain to this project. He did indicate that he has done some collecting in various places along the Minnesota River and has recovered historic and prehistoric artifacts. None of his collection came from the immediate project area.

Dick Cox: Mr. Cox is employed by the Big Stone Canning Company which owns most of the north end of the project area. He gave us permission to survey on their property as well as indicated that he knew of no cultural resources recovered from

the immediate project area.

Owen Bartells: Mr. Bartells rents the land on the north end of the project area. We also consulted him for permission to survey. Like Mr. Cox, he was unaware of any local collectors who had recovered materials from the project area.

Field Investigation

The results of the surface reconnaissance, shovel testing, rake testing, and cut bank planing were negative. No cultural materials or features were located within the survey corridor. However, we did locate a kidney-shaped mound which may possibly be a burial mound. It is located 12 meters from the cut bank of the Minnesota River approximately 70 meters west of the survey corridor (See Figure 3). The mound is 22 meters long by 7 meters wide. Because of the distance from the corridor boundary to the mound, it was not tested and verified. Additionally, no cultural material was found in association with the mound.

RECOMMENDATIONS

Based upon the results of the field examination, it appears that no significant cultural resources will be altered, damaged, or destroyed as a result of proposed construction activities. No additional testing is warrented within the proposed corridor. However, if any of the construction plans are altered in terms of location of the proposed corridor, we recommend that either Impact Services, the Office of the State Archaeologist, or the State Historic Preservation Office be contacted for the purpose of determining the nature of the mound located along the

Minnesota River.

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APPENDIX A

SCOPE OF WORK

SCOPE OF WORK
BIG STONE LAKE-WHETSTONE RIVER
CHANNEL ALIGNMENT
MINNESOTA

1.00 General

1.01 The cultural resources survey reports serve several functions. The technical report is a planning tool which aids in the preservation and protection of our cultural heritage. It is also a comprehensive, scholarly document that not only fulfills federally mandated legal requirements, but also serves as a scientific reference for future professional studies. As such, the report's contents should be both descriptive and analytic in nature. The popular report provides the results of the survey in layman's terms. It serves primarily as a means of educating the public about the cultural heritage of an area but also informs them of how the St. Paul District is fulfilling its obligations toward cultural resources.

1.02 The survey and reports represent partial fulfillment of the obligations of the St. Paul District toward cultural resources as required by the National Environmental Policy Act of 1969 (P.L. 91-190); National Historic Preservation Act of 1966 (P.L. 89-665); Protection and Enhancement of the Cultural Environment (EO 11593); Advisory Council's Procedures for the Protection of Historic and Cultural Properties (36 CFR 800); Preservation of Historic and Archaeological Data 1974 (P.L. 93-291); and Identification and Administration of Cultural Resources (33 CFR 305).

1.03 The cultural resources survey shall focus on the study area as described in paragraph 4.01. The study shall consist of the following tasks: (1) an intensive field survey of the study area; (2) preparation of an artifact inventory; (3) an evaluation of cultural resources located within the direct-impact-zone; (4) an evaluation of the potential indirect impacts; and (5) the preparation of a detailed technical survey report.

1.04 The objective of the Phase I cultural resources survey is to identify all the cultural resources which may be affected by the implementation of the proposed project and to recommend additional testing for those resources which may be significant.

1.05 The Contractor shall provide specialized skills and knowledge during the course of the study, to include expertise in the disciplines of archeology, history, architectural history, and any other sciences as would be required. The Contractor shall also provide all materials and equipment necessary to expeditiously perform those services required of the study.

1.06 The Contractor shall designate, in writing, the name of the Principal Investigator, and the Principal Investigator shall sign the draft and final reports.

1.07 The extent and character of the work to be accomplished by the Contractor shall be subject to the general supervision, direction, control, and approval of the Contracting Officer.

2.00 Definitions

2.01 "Cultural resources" are defined to include any building, site, district, structure, object, data, or other material relating to the history, architecture, archeology, or culture of an area.

2.02 "Phase I cultural resources survey" is defined as an intensive, on-the-ground survey and testing of an area sufficient to determine the number and extent of the resources present and their relationship to project features. A Phase I cultural resources survey will result in data adequate to assess the general nature of the sites present, a recommendation for additional testing of those resources which, in the professional opinion of the Principal Investigator, may provide important cultural and scientific information, and detailed time and cost estimates for Phase II testing.

2.03 "Phase II testing" is defined as the intensive testing of those sites which may provide important cultural and scientific information. Phase II testing will result in data adequate to determine the resources' eligibility for inclusion on the National Register of Historic Places, a plan for the satisfactory mitigation of eligible sites which will be directly or indirectly impacted, and detailed time and cost estimates for mitigation.

3.00 Project Description

3.01 The Big Stone Lake-Whetstone River Flood Control Project in South Dakota and Minnesota was authorized by Congress in the Flood Control Act of 27 October 1965 (P.L. 89-298). The project area is located in northeastern Grant County, South Dakota, and southwestern Big Stone County, Minnesota. The topography of the region is varied but the project is confined to the Minnesota River Valley. The valley, at this point, is a broad alluvial plain, broken by ridges of glacial drift, and containing poorly drained and swampy areas. The drier land is primarily covered by pasture and cultivated fields.

3.02 The flood control project consists of a dam, reservoir, channel improvements, spillways, and water control structures. Most of the project construction has already been completed. The study area for this contract is the location of a proposed channel realignment along the Minnesota River.

3.03 Two archeological surveys of the project area were undertaken in 1974 and 1975 by personnel from the University of Minnesota. The 1974 survey located one highly disturbed site. The 1975 survey had negative results.

4.00 Study Area

4.01 The area to be examined consists of a proposed channel realignment in sections 16, 21, and 27, T. 121N, R. 46W in Big Stone County, Minnesota. Construction drawings of the channel area ar inclosed. The channel and associated spoilbank levees will be approximately 2 miles long and 500 feet wide.

5.00 General Performance Specifications

5.01 The Contractor shall conduct an intensive on-the-ground survey of the study area commensurate with the level of a Phase I cultural resources survey as described in paragraph 2.02. Upon receipt of the draft report, the recommendations and cost estimates for further testing will be evaluated by the Contracting Officer.

5.02 The survey shall include surface inspection in areas where surface visibility allows for adequate recovery of cultural materials and subsurface testing where surface visibility is limited. Subsurface investigation may include test pits, corings, or cutbank profiles where appropriate.

5.03 When sites are not wholly contained within the right-of-way limits, the Contractor shall survey an area outside the right-of-way limits large enough to include the entire site within the survey area. This shall be done in an effort to delineate site boundaries and to determine the degree to which the site will be impacted.

5.04 Should it become necessary in the performance of the work and services, the Contractor shall, at no cost to the Government, secure the rights of ingress and egress on properties not owned or controlled by the Government. The Contractor shall secure the consent of the owner, his representative, or agent prior to effecting entry on such property.

5.05 The Contractor shall keep standard field records which shall include, but are not limited to, field notebooks, site survey forms, field maps, and photographs.

5.06 All operations shall be conducted under the supervision of qualified professionals in the disciplines appropriate to the data that are to be recovered.

5.07 Techniques and methodologies used during the survey shall be representative of the current state of knowledge for their respective disciplines.

5.08 The recommended professional treatment of recovered materials is curation and storage of the artifacts at an institution that can properly insure their preservation and that will make them available for research and public view. If such materials are not in Federal ownership, the

consent of the owner must be obtained in accordance with applicable law, concerning the disposition of the materials after completion of the report.

6.00 General Report Requirements

6.01 Upon completion of the field investigation and research, the Contractor shall prepare a technical report detailing the work done, the results, the recommendations for further testing, and the time and cost estimates for Phase II testing.

6.02 The technical report shall include, but is not limited to, the following sections:

a. Title page: The title page should provide the following information: the type of survey undertaken (reconnaissance, intensive) the cultural resources which were assessed (archeological, historical, architectural); the project name and location (county and State); the date of the report; the Contractor's name; the contract number; the name of the author(s) and/or the Principal Investigator; the signature of the Principal Investigator; and the agency for which the report is being prepared.

b. Administrative Summary: The summary will be a synopsis of the report defining the project area and the level of the cultural resources investigation. It shall summarize the research objectives and problems, methods, numbers, and types of resources identified, the significant recommendations and any unusual or innovative findings or techniques developed during the course of the investigation. Because this information will serve both as an administrative summary and as a portion of that information required by the Department of the Interior for its annual report to Congress (pursuant to section 5.c. of the Reservoir Salvage Act as amended), the summary should be as detailed and succinct as possible. Normally the summary will not exteed one typewritten page.

c. Table of Contents.

d. Introduction: This section should include the purpose of the report; a description of the proposed project; the location of the proposed project including a map of the general area; and a project map (a list of USGS quadrangle maps which cover the project area should also be included); and the dates during which the field survey was conducted. The introduction shall also contain the name of the institution where recovered materials will be curated.

e. Environmental Setting: This section should contain a brief description of the environment of the study area, both present and past conditions, and it should be of a length commensurate with other sections of supporting type information.

f. Survey Methods: This section should give an explicit statement of survey methods and rationale. It should describe the areas which were surveyed (types of ground cover, degree of surface visibility, etc.), whether or not the survey resulted in the location of any cultural resources, the methods used to survey the area (pedestrian reconnaissance, subsurface test, etc.) the rationale for eliminating uninvestigated areas, the estimated size of the investigated sample and its relationship to the sample universe (e.g., 100 acres representing 15 percent of the project impact area), and the grid or transect interval used. The recommended grid or transect interval is 15 meters (50 feet); however, this may vary depending upon field conditions.

g. Summary of Regional Prehistory and History: This section should discuss the regional cultural developments in their spatial and chronological position.

h. Survey Results: This section should describe the archeological, architectural, or historical resources encountered, including the size of the site; type of site (i.e., historic dwelling, prehistoric village, mound group, etc.); the cultural component(s) of the site (if discernible); and the general nature of the site as it existed at the time of the survey. An inventory of cultural material recovered from sites may be included in this section or added to the site survey forms. Accession numbers for collected cultural material should be included as a part of the inventory. Inventoried sites shall include a site number. Official site designations assigned by an appropriate State agency are preferred. However, if temporary site numbers will be used in either the draft or final reports, they shall be substantially different from the official site designations so as to avoid confusion or duplication of site numbers.

i. Recommendations: This section should discuss the direct and indirect impacts that the proposed project will have on cultural resources. It should contain the recommendations of the Principal Investigator for the Phase II testing of those resources which, in his opinion, may provide important cultural and scientific information. The Contractor shall also provide time and cost estimates for completion of Phase II testing as defined in paragraph 2.03, The recommendations shall also include a discussion of any sites, structures, or materials illustrating distinctive cultural processes which are potentially suitable for interpretive development for the public.

j. References: (American Antiquity format)

k. Appendix: This section should contain the scope of work and the resumes of the Principal Investigator and Field Director.

1. The above items do not necessarily have to be discrete sections; however, they should be readily discernible to the reader.

2.00 Format Specifications

7.01 Test materials will be typed (single-spaced) on good quality bond paper, 8.5 inches by 11.0 inches, with a 1.5 inch binding margin on the left, 1 inch margins on the top and right, and a 1.5 inch margin at the bottom.

7.02 Information will be presented in textual, tabular, and graphic forms, whichever is most appropriate, effective, or advantageous to communicate the necessary information.

7.03 All figures must be readily reproducible by standard xerographic equipment.

8.00 Submittals

8.01 The contractor shall complete all work and services under this contract within the following time limitations:

a. Fieldwork shall commence on or before 1 May 1980.

b. The draft final report shall be submitted on or before 1 June 1980.

c. An original and 10 copies of the final report shall be submitted 15 calendar days following receipt of the Government's review and comments, or no later than 15 August 1980.

8.02 The Contractor shall furnish separately, as part of contract correspondence, one copy of the construction drawings showing the boundaries of all cultural resources located during the survey, and their relationship to project features. This drawing shall delimit those areas included in the survey as described in paragraph 6.02 f. One copy of the site survey forms shall be submitted separately as volume 2 of the report.

8.03 The Contractor shall submit the photographic negatives for all black and white photographs which appear in the final report.

8.04 The Contracting Officer shall provide to the Contractor two copies of the construction drawings mentioned in paragraph 4.01. The Contracting Officer will also make available copies of the previous archeological survey reports for the project area. If requested, the Contracting Officer will provide a letter of introduction signed by the St. Paul District Engineer explaining the objectives of the work and requesting cooperation from private landowners.

8.05 Neither the Contractor nor his representative shall release any sketch, photograph, report, or other material of any nature obtained or prepared under the contract without specific written approval of the Contracting Officer prior to the acceptance of the final report by the Government.

9.00 Method of Payment

9.01 Payment for Phase I work will be made in lump sum upon approval of the final report by the Contracting Officer.

APPENDIX B

VITA

VITA

PERSONAL DATA

Name: Kathleen Ann Roetzel
Birthday: June 19, 1951
Marital Status: Married
Telephone: 507-388-4543 (Home & Office)
Address: 333 Kingsway Drive
North Mankato, Minnesota 56001

EDUCATION

Post Graduate Work (Anthropology/Archaeology), Ohio State University and the University of Minnesota. 1974,1975.
M.A. in Anthropology/Archaeology from Ohio State University, 1974.
B.A. in Sociology from Mankao State University, 1973.
A.A. (General) from Rochester Community College. 1971.

CURRENT POSITION

Prehistoric Archaeologist and President, Impact Services Inc.
P. O. Box 3224 Mankato, Minnesota 56001

FIELD EXPERIENCE

Principal Investigator: Cultural Resource Survey of the Wastewater Treatment Facilities at Morton, Renville County, Minnesota. Winter, 1980.

Principal Investigator: Cultural Resource Survey of the New Ulm Airport Expansion Project, Brown County, Minnesota. Winter, 1980.

Principal Investigator: The Cultural Resource Investigation of the Wild Rice River - South Branch and Felton Ditch Flood Control Project Area, Clay and Norman Counties, Minnesota. For the St. Paul District, U. S. Army Corps of Engineers. Fall, 1979.

Principal Investigator: An Archaeological Investigation of the Proposed Lagoon Site, Dam Site Recreation Area, Coralville Lake, Iowa River, Iowa. With Richard A. Strachan. For the Rock Island District, U. S. Army Corps of Engineers. Summer, 1979.

Principal Investigator: Archaeological Site Survey and Testing of the Harlan County Lake, Republican River, Nebraska. For the Kansas City District, U. S. Army Corps of Engineers. Summer, 1979.

Principal Investigator: The Archaeological Reconnaissance Survey of the Storm Water Diversion and Treatment System Project, Waseca County, Minnesota. Summer, 1979.

Principal Investigator: Site Survey at Lakeview City Park, Waseca County, Minnesota. Summer, 1979.

Site Survey at Blue Earth City Park, Faribault County, Minnesota. Principal Investigator: Richard A. Strachan. Spring, 1979.

Site Survey of the Proposed Wastewater Treatment Facility in Zumbro Falls, Wabasha County, Minnesota. Principal Investigator: Richard A. Strachan. Spring, 1979.

Principal Investigator: Cultural Resource Inventory of the Historic and Prehistoric Cultural Resources of the Chippewa National Forest. With Nancy L. Woolworth. For the United States Forest Service. Milwaukee, Wisconsin. Fall, 1979.

Site Supervisor: Site Survey of the Stanton and Preferred Corridors, North and South Dakota. Principal Investigator: Richard A. Strachan. Summer and Fall, 1978.

Principal Investigator: Site Survey of the Bureau of Reclamation Irrigation Project Near Pollock and Herreid, Campbell County, South Dakota. With Nancy L. Woolworth. Summer, 1978.

Field Supervisor: Site Survey at Garvin Park, Lyons County, Minnesota. Principal Investigator: Richard A. Strachan. Fall, 1977.

Principal Investigator: Excavation of the Eleanor Site (21NL30), Nicollet County, Minnesota. With Richard A. Strachan. Summer, 1977.

Principal Investigator: Archaeological Site Survey of the Eleanor Site (21NL30), Nicollet County, Minnesota. With Richard A. Strachan. Spring, 1977.

Principal Investigator: Archaeological Survey of Woods Lake Park, Faribault County, Minnesota. Fall, 1976.

Principal Investigator: Site Survey of Swan Lake Perimeter, Nicollet County, Minnesota. With Richard A. Strachan. Fall, 1976.

Field Supervisor: Archaeological Excavation of the Eleanor Site (21NL30), Nicollet County, Minnesota. Principal Investigator: Richard A. Strachan. Summer, 1976.

Principal Investigator: Aerial Site Survey of Lake Ashtabula, Barnes County, North Dakota. With Richard A. Strachan. For the St. Paul District, U. S. Army Corps of Engineers. Summer, 1976.

Salvage Excavation of the Silvernale Site (Mississippian Village), Goodhue County, Minnesota. Principal Investigator: Christina Harrison. Spring and Fall, 1976.

Field Supervisor: Site Survey of the Swan Lake Perimeter, Nicollet County, Minnesota. Principal Investigator: Richard A. Strachan. Fall, 1975.

Field Supervisor: Site Survey of the Rochester Flood Control Area, Olmsted County, Minnesota. Principal Investigator: Richard A. Strachan. Fall 1975.

Crew Member: Excavation of the Mankato Site (Woodland Tool Factory), Blue Earth County, Minnesota. Principal Investigator: Richard A. Strachan. Summer, 1974.

Crew Member: Excavation of the Bauer Site (Woodland Camp), Le Sueur County, Minnesota. Principal Investigator: Richard A. Strachan. Summer and Fall, 1972.

LABORATORY EXPERIENCE

Analysis of Material from the Site Survey and Testing of the Harlan County Lake, Republican River, Nebraska. Winter 1980.

Analysis of Material from the Archaeological Investigation at the Proposed Lagoon Site, Coralville Lake, Iowa. Winter, 1979.

Analysis of Material from the Site Survey of Blue Earth City Park, Faribault County, Minnesota. Spring, 1979.

Analysis of Material from the Archaeological Reconnaissance Near Zumbro Falls, Wabasha County, Minnesota. Spring, 1979.

Analysis of Material from the Archaeological Survey of the Stanton and Preferred Corridors, North and South Dakota. Fall, 1978.

Analysis of Material from the Archaeological Survey of the Bureau of Reclamation Irrigation Project, Campbell County, South Dakota. Summer, 1978.

Analysis of Results from the Cultural Resource Inventory of the Chippewa National Forest. Summer, 1978.

Analysis of Material from the Site Survey of Garvin Park, Lyons County, Minnesota. Fall, 1977.

Analysis of Material from the Archaeological Excavation of the Eleanor Site (21NL30), Nicollet County, Minnesota. Fall, 1977.

Analysis of Material from the Site Survey of Woods Lake Park,

Faribault County, Minnesota. Fall, 1976.

Analysis of Material from the Site Survey of the Swan Lake Perimeter, Nicollet County, Minnesota. Fall, 1976.

Analysis of Material from the Archaeological Excavations of the Eleanor Site (21NL30), Nicollet County, Minnesota. Summer, 1976.

Analysis and Report Preparation of the Lake Ashtabula Aerial Infrared Survey, Barnes County, North Dakota. Summer, 1976.

Analysis of Material from the Rochester Flood Control Area, Olmsted County, Minnesota. Fall, 1975.

Analysis and Report Preparation of the Mankato Flood Control Area Project, Blue Earth County, Minnesota. Summer, 1975.

Laboratory Technician: Division of Archaeology, Ohio Hisorical Society. Summer, 1974.

Laboratory Supervisor: Museum of Anthropology, Mankato State University. Fall, 1972.

PUBLICATIONS AND MANUSCRIPTS

The Cultural Resource Survey of the Proposed Wastewater Treatment Facilities at Morton, Renville County, Minnesota. Winter, 1980.

Archaeological Site Survey and Testing of the Harlan County Lake, Republican River, Nebraska. For the Kansas City District, U.S. Army Corps of Engineers. (In Progress).

The Cultural Resources Survey of the New Ulm Airport Expansion Project, Brown County, Minnesota. Winter, 1979.

The Cultural Resource Investigation of the Wild Rice River - South Branch and Felton Ditch Flood Control Project Area, Clay and Norman Counties, Minnesota. With Michael A. Eigen. For the St. Paul District, U. S. Army Corps of Engineers. Winter, 1979-1980.

An Archaeological Investigation of the Proposed Lagoon Site, Dam Site Recreation Area, Coralville Lake, Iowa. With Richard A. Strachan. For the Rock Island District, U. S. Army Corps of Engineers. With Richard A. Strachan. Winter, 1979.

The Archaeological Reconnaissance Survey of the Storm Water Diversion and Treatment System Project, Waseca County, Minnesota. Summer, 1979.

An Archaeological and Historical Survey and Report of Findings on Proposed Bureau of Reclamation Project near Pollock and Herreid, South Dakota. With Nancy L. Woolworth. For the Department of the Interior, Bureau of Reclamation.

Cultural Resource Inventory of the Historic and Prehistoric Resources of the Chippewa National Forest. With Nancy L. Woolworth. For the United States Forest Service.

Aerial Infrared Archaeological Survey of the Lake Ashtabula, North Dakota. With Richard A. Strachan. For the St. Paul District, U. S. Army Corps of Engineers. Fall, 1976.

Archaeological Survey of Mankato Flood Control Area. With Richard A. Strachan. For the St. Paul District, U. S. Army Corps of Engineers. Fall, 1975.

Problems in Teaching Kinship in Anthropology. Paper Presented at the Annual Meetings of the Minnesota Academy of Science. May, 1974.

TEACHING EXPERIENCE

Instructor (Sessional): Department of Sociology, Mankato State University. Winter, 1980.

Instructor (Sessional): Department of Sociology, Mankato State University. Winter and Spring, 1978.

Instructor (Sessional): Department of Sociology/ Anthropology, Hamline University. Summer, 1977.

Instructor (Sessional): Department of Sociology, Mankato State University. Spring, 1977.

Instructor (Sessional): Department of Sociology, Mankato State University. Winter, 1976.

Teaching Assistant: Department of Anthropology, Ohio State University. Winter, 1974.

Teaching Assistant: Department of Anthropology, Ohio State University. Spring, 1974.

AREAS OF INTEREST

Eastern North American Prehistory, Upper Great Lakes Prehistory Paleoecology, Conservation Archaeology, Physical Archaeology, and Museology.

PROFESSIONAL MEMBERSHIPS

Society for American Archaeology
American Anthropological Association
Council for Minnesota Archaeology
Minnesota Academy of Science

Blue Earth County Historical Society

REFERENCES

Christy A.H. Caine, State Archaeologist
Assistant Professor of Anthropology
Hamline University
St. Paul, Minnesota

William R. DeMaree, Professor and Chairman of Sociology
Mankao State University
Mankato, Minnesota

Martha Potter Otto
Division of Archaeology
Ohio Historical Society
Columbus, Ohio

Richard A. Strachan, Associate Professor of Anthropology
Director, Museum of Anthropology
Mankato State University
Mankato, Minnesota

PLATES

Plate 1: South View from the National Wildlife Refuge Road

Plate 2: North View of Wooded Area Along the Minnesota River

Plate 3: Wooded Banks of the Minnesota River

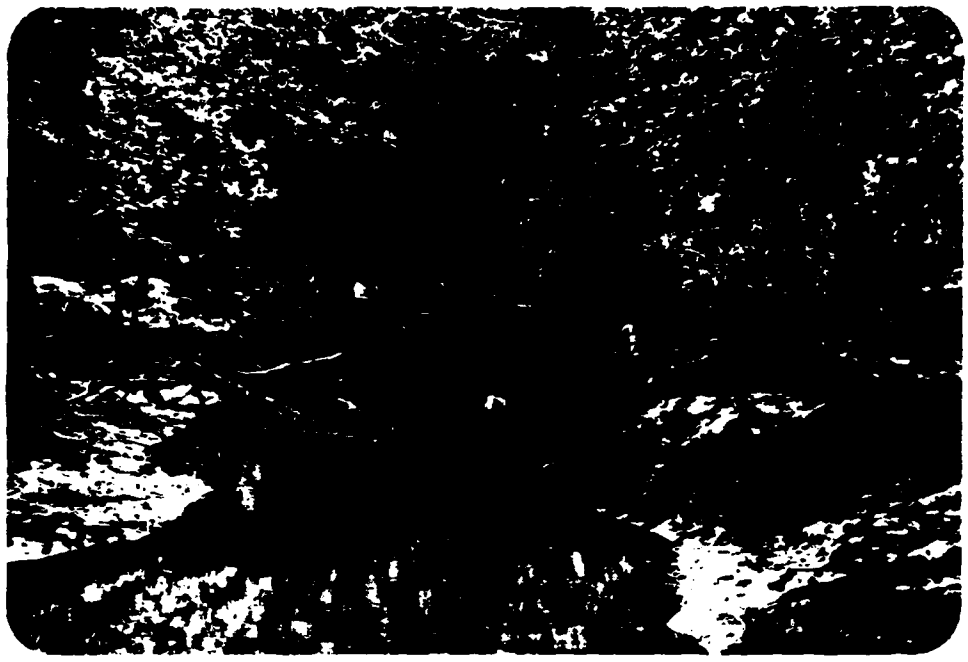

Plate 4: Pasture With Scattered Woods At North End of Survey Line

END

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